

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	CESD3V3D3
▶ Overseas	Part Number	CESD3V3D3
▶ Equivalent	Part Number	CESD3V3D3

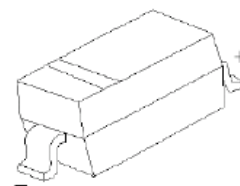
EV is the abbreviation of name EVVO

SOD-323 Plastic-Encapsulate Diodes

DESCRIPTION

Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD.

The combination of small size, high level of ESD protection makes them a flexible solution for applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.



SOD-323



FEATURES

- Uni-directional ESD protection of one line
- Reverse stand-off voltage: 3.3V
- Low reverse clamping voltage
- Low leakage current
- Excellent package: 1.70mm × 1.30mm × 1.00mm
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

APPLICATIONS

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments communication systems

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	$V_{\text{ESD}}^{(1)}$	±25	kV
		±25	
JESD22-A114-B ESD Voltage		±16	
ESD Voltage		±0.4	
Peak Pulse Power	$P_{\text{PP}}^{(2)}$	210	W
Peak Pulse Current	$I_{\text{PP}}^{(2)}$	16	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	°C
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

(1). Device stressed with ten non-repetitive ESD pulses.

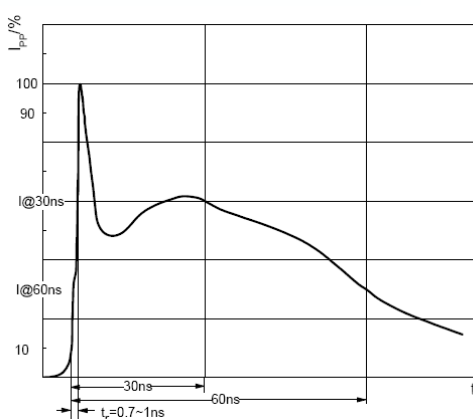
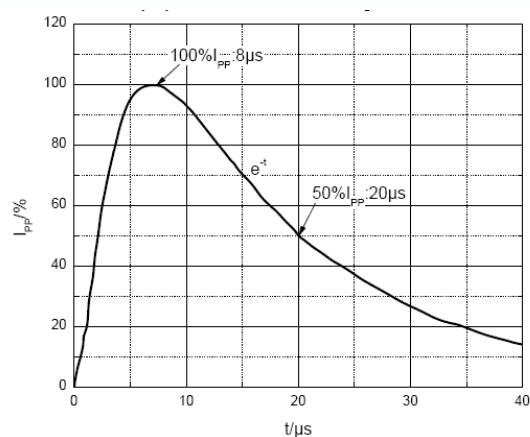
(2). Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

SOD-323 Plastic-Encapsulate Diodes
ESD standards compliance
IEC61000-4-2 Standard

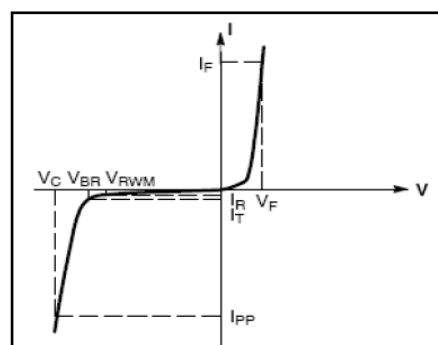
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999


ESD pulse waveform according to IEC61000-4-2

8/20μs pulse waveform according to IEC 61000-4-5
ELECTRICAL PARAMETER

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage
V_F	Forward Voltage @ I_F
I_F	Forward Current


V-I characteristics for a uni-directional TVS

SOD-323 Plastic-Encapsulate Diodes

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

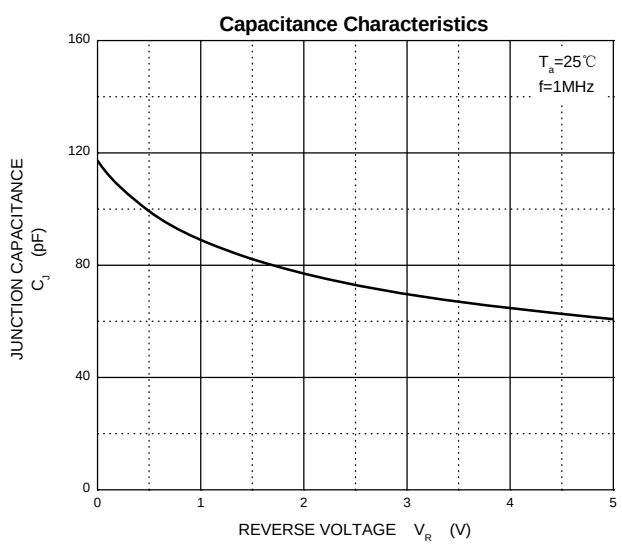
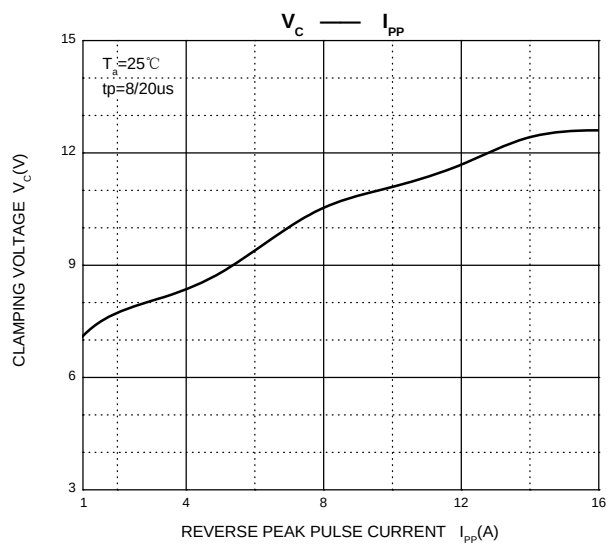
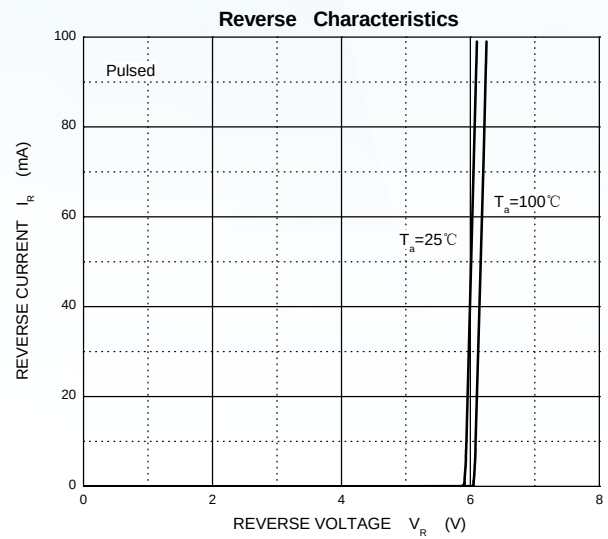
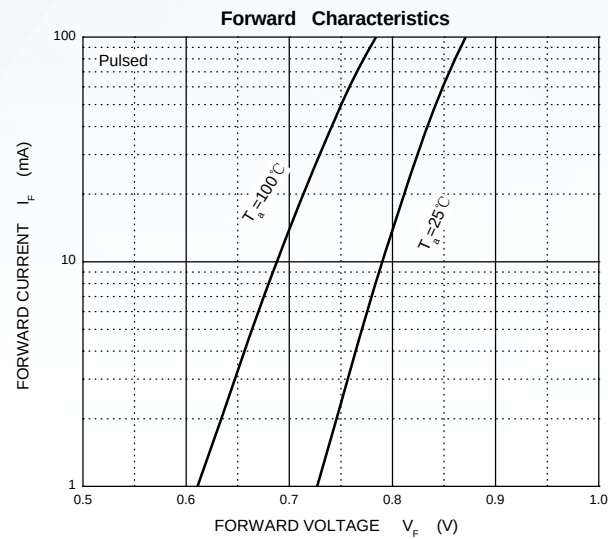
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	$V_{RWM}^{(1)}$				3.3	V
Reverse leakage current	I_R	$V_{RWM}=3.3\text{V}$			10	μA
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	5.0		5.9	V
Clamping voltage	$V_C^{(2)}$	$I_{PP}=16\text{A}$			13	V
Forward voltage	V_F	$I_F=10\text{mA}$			0.9	V
Junction capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		120		pF

(1).Other voltages available upon request.

(2).Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

SOD-323 Plastic-Encapsulate Diodes

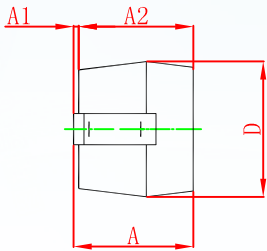
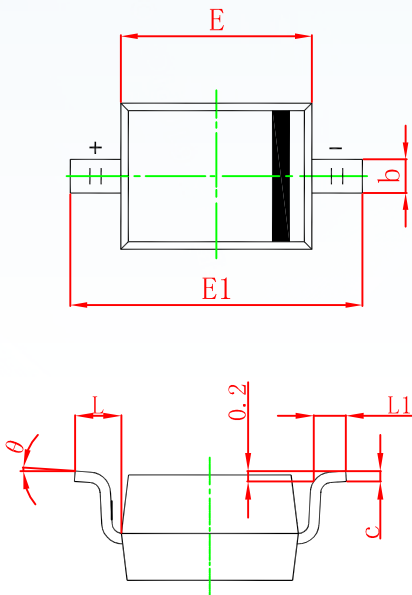
TYPICAL CHARACTERISTICS



SOD-323 Plastic-Encapsulate Diodes

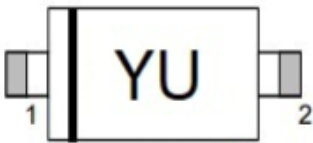
PACKAGE OUTLINE AND PAD LAYOUT INFORMATION

SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Marking



Ordering information

Order Code	Package	Baseqty	Deliverymode
CESD3V3D3	SOD-323	3000	Tape and reel

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